

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A computer implemented method of searching comprising the steps of:

receiving from a user a search query requesting information, wherein the query is provided to retrieve at least one recommendation and generate an expanded query;

retrieving the at least one recommendation for alternative search results relating to using the received query, the recommendation based on users search query logs and search pattern information user search patterns, and user profile information, wherein the at least one recommendation relating to the search query is retrieved from a recommendation database, and wherein the recommendation database is generated by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and

determining that the at least one recommendation is a valid recommendation in the plurality of recommendations relating to the search query string;

generating a text index including the at least one recommendation based on information in the data structure;

generating an expanded query based on using the received query;

performing a search using the expanded query to retrieve documents;

generating thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features to generate themes that describe the retrieved documents; and

presenting the recommendation for alternative search results, the thematic clusters relating to the retrieved documents, and the retrieved documents.

2. (cancelled)

3. (previously presented) The method of claim 1, wherein the recommendation is further based on user profile information.

4. (original) The method of claim 3, wherein the user profile information comprises aggregate information.

5. (cancelled)

6. (cancelled)

7. (currently amended) The method of claim 1 or 6, wherein the step of generating a data structure including the recommendations using the received relating to a search query string comprises the steps of:

populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof;

converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format; and

validating availability of the recommendations.

8. (currently amended) The method of claim 7, wherein the step of retrieving at least one recommendation using the received relating to a search query string comprises the steps of:

parsing the received ~~search~~-query to generate a search query string;

searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string; and

retrieving the at least one recommendation relating to the search query string using the key.

9. (Currently amended) The method of claim 7, wherein the step of retrieving at least one recommendation using the received ~~relating to a search~~ query string comprises the steps of:

parsing the received search query to generate a search query string;  
searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string, and if the key is found, retrieving the at least one recommendation relating to the search query string using the key; and

searching the equivalence table of the populated data structure using the search query string to find an alternative key associated with at least one recommendation relating to the search query string, and retrieving the at least one recommendation for information using the alternative key, if the key is not found.

10. (currently amended) A system for searching comprising:

a processor operable to execute computer program instructions; and

a memory operable to store computer program instructions executable by the processor, for performing the steps of:

receiving from a user a search query requesting information, wherein the query is provided to retrieve at least one recommendation and generate an expanded query;

retrieving the at least one recommendation for alternative search results relating to using the received query, the recommendation based on users search query logs and search pattern information user search patterns, and user profile information, wherein the at least one recommendation relating to the search query is retrieved from a recommendation database, and wherein the recommendation database is generated by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and  
determining that the at least one recommendation is a valid recommendation in the plurality of recommendations relating to the search query string;

generating a text index including the at least one recommendation  
~~based on information in the data structure;~~  
generating an expanded query ~~based on~~ using the received query;  
performing a search using the expanded query to retrieve documents;  
generating thematic clusters relating to the retrieved documents, the  
thematic clusters generated by performing linguistic analysis of the retrieved  
documents using linguistic extraction features to generate themes that describe the  
retrieved documents; and  
presenting the recommendation for alternative search results, the thematic  
clusters relating to the retrieved documents, and the retrieved documents.

11. (cancelled)

12. (previously presented) The system of claim 10, wherein the recommendation is  
further based on user profile information.

13. (original) The system of claim 12, wherein the user profile information  
comprises aggregate information.

14. (cancelled)

15. (cancelled)

16. (currently amended) The system of claim 1 ~~15~~, wherein the step of generating a data structure including the recommendations using the received relating to a search query string comprises the steps of:

populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof;

converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format; and

validating availability of the recommendations.

17. (currently amended) The system of claim 16, wherein the step of retrieving at least one recommendation using the received relating to a search query string comprises the steps of:

parsing the received ~~search~~ query to generate a search query string;

searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string; and

retrieving the at least one recommendation relating to the search query string using the key.

18. (Currently amended) The system of claim 16, wherein the step of retrieving at least one recommendation using the received relating to a search query string comprises the steps of:

parsing the received ~~search~~ query to generate a search query string;

searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string, and if the key is found, retrieving the at least one recommendation relating to the search query string using the key; and

searching the equivalence table of the populated data structure using the search query string to find an alternative key associated with at least one recommendation relating to the search query string, and retrieving the at least one recommendation for information using the alternative key, if the key is not found.

19. (currently amended) A computer program product for performing a search in an electronic data processing system, comprising:

a computer readable medium;

computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of

receiving from a user a search query requesting information, wherein the query is provided to retrieve at least one recommendation and generate an expanded query;

retrieving the at least one recommendation for alternative search results relating to using the received query, the recommendation based on users search query logs and ~~search pattern information~~ user search patterns, and user profile information, wherein the at least one recommendation relating to the ~~search~~ query is retrieved from a recommendation database, and wherein the recommendation database is generated by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and  
determining that the at least one recommendation is a valid  
recommendation in the plurality of recommendations relating to the search  
query string;

generating a text index including the at least one recommendation  
based on information in the data structure;  
generating an expanded query based on using the received query;  
performing a search using the expanded query to retrieve documents;

generating thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features to generate themes that describe the retrieved documents; and

presenting the recommendation for alternative search results, the thematic clusters relating to the retrieved documents, and the retrieved documents.

20. (cancelled)

21. (previously presented) The computer program product of claim 19, wherein the recommendation is further based on user profile information.

22. (original) The computer program product of claim 21, wherein the user profile information comprises aggregate information.

23. (cancelled)

24. (cancelled)

25. (Currently amended) The computer program product of claim 1 24, wherein the step of generating a data structure including the recommendations using the received relating to a search query string comprises the steps of:

populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof;

converting the plurality of terms and/or phrases and equivalents thereof to eXtensible Markup Language format; and validating availability of the recommendations.

26. (Currently amended) The computer program product of claim 25, wherein the step of retrieving at least one recommendation recommendations using the received relating to a search query string comprises the steps of:

parsing the received search query to generate a search query string;  
searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string; and  
retrieving the at least one recommendation relating to the search query string using the key.

27. (Currently amended) The computer program product of claim 25, wherein the step of retrieving at least one recommendation recommendations using the received relating to a search query string comprises the steps of:

parsing the received search query to generate a search query string;

searching the populated data structure using the search query string to find a key associated with at least one recommendation relating to the search query string, and if the key is found, retrieving the at least one recommendation relating to the search query string using the key; and

searching the equivalence table of the populated data structure using the search query string to find an alternative key associated with at least one recommendation relating to the search query string, and retrieving the at least one recommendation for information using the alternative key, if the key is not found.